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Can Events Predict Violent Intra-State Crises?

Peter Tikuisis

Canada

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Defence R&D Canada – Toronto

Technical Report
DRDC Toronto TR 2010-189
January 2011

Principal Author

Original signed by Peter Tikuisis

Peter Tikuisis

Senior Defence Scientist

Approved by

Original signed by Keith Stewart

Keith Stewart

Section Head, Adversarial Intent

Approved for release by

Original signed by K.C. Wulterkens

K.C. Wulterkens

For Chair, Knowledge and Information Management Committee

Abstract

Events data were analyzed for their predictive potential as indicators of occurrences of politically violent intra-state crises marked by adverse regime changes, revolutionary wars, and ethnic wars. An average of 22 randomly-selected destabilizing and stabilizing events per month were analyzed for 25 crises between 1990 and 2003 inclusive selected from those identified by the Political Instability Task Force (PITF) as onsets of state failure. Events covered a 12-month period preceding a crisis plus the month of crisis for a total of 7147 events. Subject matter experts analyzed these events according to various Country Indicators for Foreign Policy (CIFP)-defined state power and state performance characteristics, and scored them against an impact assessment involving casuality, centrality, and escalation. Sixty-eight percent of crises did not indicate trends in any event characteristic leading up to the crises. Of those crises where trends were significant, there was no consistency in the nature, frequency, intensity, and direction of the event characteristics that did change. This study concluded that randomly-selected events analyzed using the CIFP construct of state power and state performance factors do not readily reveal imminent politically violent intra-state crises identified as state failure onsets by PITF during the 12 months leading up to the crisis. Recommendations for extracting a deeper disaggregation of events data for prediction purposes are discussed.

Résumé

Les données sur les événements ont été analysées en fonction de leur potentiel prédictif, notamment en tant que signes précurseurs de crises intra-étatiques accompagnées de violences politiques et caractérisées par des changements de régime, des guerres révolutionnaires et des conflits ethniques néfastes. En moyenne, 22 événements par mois – choisis au hasard et avec un effet déstabilisateur ou stabilisateur – ont été analysés. Cela englobait 25 crises survenues entre 1990 et 2003 inclusivement, qui faisaient partie de la liste des situations considérées par le Groupe de travail sur l'instabilité politique (GTIP) comme les signes précurseurs d'une déroute de l'État. L'analyse portait sur les 12 mois qui ont précédé une crise et le mois pendant lequel elle a sévi, c'est-à-dire sur 7 147 événements au total. Des experts en la matière les ont analysés en fonction de différents critères permettant de mesurer le pouvoir et la performance de l'État, tels qu'ils sont définis dans les *Country Indicators for Foreign Policy* (CIFP). Les experts les ont classés en fonction d'une évaluation des répercussions, y compris du nombre de victimes, de la centralité et de l'escalade des violences. Dans 68 p. 100 des cas, en fonction de chacun des critères utilisés, il n'était pas possible de prévoir les crises. S'agissant des crises pour lesquelles les signes avant-coureur étaient importants, aucune uniformité n'a été constatée en ce qui concerne la nature, la fréquence, l'intensité et l'orientation des caractéristiques liées à l'événement, qui ont changé. L'étude a permis de conclure que, pour les événements choisis au hasard et analysés en fonction des critères définissant le pouvoir et la performance de l'État, au titre des CIFP, aucun signe ne permettait de prévoir facilement l'éminence d'une crise intra-étatique accompagnée de violences politiques, conformément aux signes précurseurs définis par le GTIP, pendant les 12 mois qui ont précédé la crise en question. Il est en outre question des recommandations selon lesquelles il convient de mieux ventiler les données sur les événements à des fins prévisionnelles.

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Executive summary

Can Events Predict Violent Intra-State Crises?

Peter Tikuisis; DRDC Toronto TR 2010-189; Defence R&D Canada – Toronto.

Weak, failing, and failed states have received considerable attention in the past couple of decades owing to their proliferation during and following the end of the Cold War, their propensity to political violence, and their attractiveness as safe havens for terrorist organizations. Such cases are relevant to Canada's interest specifically if its military forces are be called upon to intervene in accordance with a core mission of Canada to lead and/or conduct a major stabilization operation for an extended period. Hence, whether in response to humanitarian obligation or security risk, it is imperative to understand and ultimately predict the genesis of violent intra-state crises in troubled states. Prediction efforts have varied from the analysis of structural factors based on annualized indicators of state status to the analysis of events data, whether stabilizing or destabilizing. This study was primarily focused on the latter to determine the predictive potential of events analysis for urgent warning (1 – 2 months beforehand) of politically violent intra-state crises marked by adverse regime changes, revolutionary wars, and ethnic wars.

Twenty-five crises from 1990 to 2003 inclusive were selected from those identified by the Political Instability Task Force (PITF) as onsets of state failure. Approximately 20 - 25 randomly selected media-reported events for each calendar month in the 12 months preceding the crisis and during the month of the crisis were analyzed using a construct of state power and state performance characteristics developed by the Country Indicators for Foreign Policy (CIFP). In 17 out of the 25 crises (68%) studied, events were too dispersed among these various indicators to yield any significant trends leading to a crisis. There was a tendency, however, of a deterioration in state authority (to secure sovereignty and citizens) and state capacity (to mobilize resources for relief and development) prior to a crisis.

The nature, frequency, and intensity of events preceding a crisis were generally not found to be statistically unique to the type of crisis involved using a construct based on state power and state performance characteristics. Perhaps missing is a more detailed micro-level analysis on why events occur and by whom. Social/political theories of behaviour leading to collective political violence that generically fall under alternative hypotheses of 'greed', 'grievance', and 'opportunity' might provide additional insightful guidance to the interpretation of events to realize their predictive potential. If so, then this could lead to the construct of a crisis forecasting tool that could be further tailored for exploitation by the Department of National Defence (DND) and the Canadian Forces (CF) for a more informed security assessment and contingency planning for the deployment of an intervention stabilization force.

Sommaire

Des événements permettent-ils de prévoir des crises intra-étatiques violentes?

Peter Tikuisis; RDDC Toronto TR 2010-189; R & D pour la défense Canada – Toronto.

Au cours des deux dernières décennies, les États fragiles, en déroute et en proie à l'anarchie ont suscité beaucoup d'intérêt, notamment du fait de leur prolifération pendant et après la guerre froide. Cela s'explique aussi par leur tendance à dégénérer en violences politiques et à attirer des organisations terroristes, à qui ils fournissent un refuge sûr. Ces situations concernent le Canada, tout particulièrement si ses forces militaires sont appelées à intervenir conformément à l'une de ses missions fondamentales, à savoir diriger et/ou mener une opération de stabilisation importante pendant une période prolongée. Par conséquent, que ce soit pour respecter des obligations humanitaires ou contrer un risque sécuritaire, il est essentiel de comprendre et, en définitive, de prévoir la genèse des crises intra-étatiques violentes dans des États troublés. Pour ce qui est des efforts visant à prévoir ce genre de situations, les méthodes varient : elles vont de l'analyse de facteurs structurels, fondée des indicateurs annuels de la situation de l'État, jusqu'à l'analyse de données sur les événements, qu'elles aient un effet stabilisateur ou déstabilisateur. Cette étude portait principalement sur ce genre de données, avec pour objet de déterminer le potentiel prédictif de l'analyse des événements afin de signaler de manière urgente (un à deux mois à l'avance) le risque de crises intra-étatiques accompagnées de violences politiques, caractérisées par des changements de régimes, des guerres révolutionnaires et des conflits ethniques néfastes.

Au moyen de la liste des signes précurseurs d'une déroute de l'État, établie par le Groupe de travail sur l'instabilité politiques (GTIP), 25 crises ont été sélectionnées, pour la période allant de 1990 à 2003 inclusivement. L'analyse porte sur environ 20 à 25 événements choisis au hasard, dont les médias avaient rendu compte, et sur chaque mois de l'année civile au cours des 12 mois qui ont précédé la crise, et sur le mois pendant lequel la crise a sévi. Par ailleurs, l'analyse se fonde sur une série de critères permettant de mesurer le pouvoir et la performance de l'État, tels qu'ils sont énoncés au titre des Country Indicators for Foreign Policy (CIFP). Sur 17 des 25 crises (68 %) étudiées, les événements étaient trop dispersés, du point de vue de ces différents indicateurs, pour qu'il soit possible de dégager des signes précurseurs importants d'une crise éventuelle. Toutefois, il est apparu qu'une détérioration de l'autorité de l'État (le pouvoir d'assurer la souveraineté et de protéger les citoyens) et de la capacité de l'État (à mobiliser des ressources à des fins de secours et de développement) pouvait être le précurseur d'une crise.

Sur le plan statistique, et selon une grille d'analyse fondée sur le pouvoir et la performance de l'État, il semble que la nature, la fréquence et l'intensité des événements qui précèdent une crise ne soient pas, de manière générale, propres au type de crise. Cela fait peut-être ressortir la nécessité d'une analyse plus détaillée – au micro-niveau – des causes et des acteurs des événements en question. Les théories sociales/politiques des comportements qui mènent à des violences politiques collectives, qui se fondent en général sur d'autres critères, tels que l'« appât du gain », la « rancune » et l'« opportunisme », pourraient permettre de mieux interpréter les événements, afin d'exploiter leur potentiel prédictif. Si tel est le cas, cela pourrait conduire à l'élaboration d'un outil de prévision des crises, qu'il serait possible d'adapter en vue de son

utilisation par de la Défense Nationale et les Forces Canadiennes. Cela leur permettra de procéder à une évaluation de la sécurité et à une planification d'urgence plus éclairées en vue du déploiement éventuel d'une force de stabilisation.

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1 Introduction

Weak, failing, and failed states have received considerable attention in the past couple of decades owing to their proliferation during and following the end of the Cold War, their propensity to political violence, and their attractiveness as safe havens for terrorist organizations. Whether in response to humanitarian obligation or security risk, developed nations are keen to understand and predict the genesis of violent intra-state crises in such states. Prediction efforts using macro-level data have been largely based on the structural factors of a state including political (e.g., regime type), economic (e.g., trade), and social (e.g., health) indicators. In some instances, candidate indicators are tested via regression for their significance in predicting a crisis at some distant point into the future [e.g., PITF (Political Instability Task Force) model of state failure (Goldstone et al. 2010)]. In other instances, candidate indicators are aggregated to yield periodic instability scores [e.g., Fund for Peace FSI (Failed State Index) and Country Indicators for Foreign Policy FI (Fragility Index) (Carment et al. 2009)].

Notwithstanding the importance of such predictions for policy and decision makers of defence, development, and diplomacy, a warning prediction of a crisis on a much shorter time scale of a few weeks would be helpful for more immediate security contingency response planning. The failure of the Integrated Crisis Early Warning System aggregate model to predict better than 25% of violent crises in the 3-month quarter in which they occurred was deemed disappointing (O'Brien 2010). Such urgent warning would be reliant on dynamic factors such as the ongoing incidence of political violence. Indeed, the combination of structural factors with events data has been suggested as essential for accurately predicting a crisis in a country (e.g., Lundin 2004).

Although seemingly intuitive, it is not clear whether or not daily reported politically violent events by the open media can be a reliable predictor of an imminent crisis. Recent attempts to answer this question have been unsatisfactory in identifying significant predictors of a *crisis of interest*, which was defined as a fundamental and significant challenge to state authority, capacity, and/or legitimacy manifested by extreme political violence (Tikuisis et al. 2011). Events up to 3 months prior to a crisis were indistinguishable from events at other times. In this study, we re-adjusted the dependent variable from a *crisis of interest* to specific types of crises borrowing on the PITF definitions of state failure onset including adverse regime change (REG), revolutionary war (REV), and ethnic war (ETH) (see Note B1 in Annex B).

Specifically, is it reasonable to hypothesize the nature, frequency, and intensity of events preceding a crisis? Failures that have the appearance of occurring suddenly such as REG are more likely preceded by events that are distinct from failures that evolve more transparently over time such as REV and ETH. To facilitate these distinctions, events are characterized according to the dimensions of power and performance that portray the stateness of a nation. Herein, we adopt the CIFP construct of state power and performance (see Note B2 in Annex B), which forms the basis of the FI. In essence, what component of state power, i.e., Authority (to secure sovereignty and citizens), Legitimacy (claim to national and international recognition), or Capacity (to mobilize resources for relief and development) is expected to dominate events in the 12 months leading up to REG, REV, and ETH? Also, what state performance cluster (i.e., Governance, Economy, Security and Crime, Demography, Human Development, or Environment) is expected to dominate events in the same period? The 12 month period for analysis was arbitrarily chosen primarily because structural factors presumably reflect the impact of events from earlier periods.

Our previous study (Tikuisis et al. 2011) indicated that events (analyzed using the same assessment methodology as in the present study) preceding a *crisis of interest* were not significantly different from events at other times. Given that no discrimination was applied to the type of crisis involved, it is not known if destabilizing events increase in frequency and intensity prior to a specific type of crisis. This study addresses these questions for the purpose of identifying event characteristics that can be codified for urgent warning of a specific type of crisis, which is the dependent variable of this study, whether REG, REV, or ETH. The hypotheses of this study are that the nature of events, in terms of state power and performance characteristics, leading to these different crises is unique to the type of crisis involved, and that destabilizing events leading to a crisis escalate in frequency and intensity.

2 Methodology

An exploratory approach was taken herein to examine events data for trends and significant differences leading up to a crisis. The aim was to determine if events escalate in frequency and intensity prior to a crisis, and if they are unique to the type of crisis involved. All statistical analyses were performed using Statistica® (StatSoft, Tulsa, OK).

2.1 Selection of Crises

Twenty-five crises from 1990 to 2003 inclusive were selected from PITF-defined onsets of state failure (PITF 2009; see Table 1 in Annex A). Each case was preceded by at least five crisis-free years (i.e., years in which state failure was not declared) and was limited to having experienced one type of crisis (i.e., REG, REV, or ETH) at the time of failure. Figure 1 in Annex A shows the states selected (n = 12 REG, 6 REV, and 7 ETH).

2.2 Structural Factors

Various state structural factors were additionally compiled for comparisons between different types of crises. These factors included the CIFP-defined state power components and performance clusters stated earlier including the FI (Carment et al. 2009), and the significant prediction variables for the crisis identified by PITF (see Note B3 in Annex B; Hewitt et al. 2008). The Polity index, which indicates the nature of state governance on an autocratic-democratic scale [see Notes B1 (Regime change) and B3 (Regime consistency) in Annex B], was also included given the characteristic tendency of instability that anocratic states exhibit and their susceptibility to political violence (Marshall & Jaggers 2005).

Since structural factor data for any particular year are not available until the following year, prediction models must use recent past data as the closest approximation to the occurrence of a crisis. Hence, each structural factor was based on a one-year period preceding the crisis by one year, as follows: the one-year time-weighted structural factor $SF = \{[(nf - 1) \times SF_{year-2}] + [(13 - nf) \times SF_{year-1}]\}/12$ where nf is the numeric position (from 1 to 12) of the calendar month of instability. For example, if a crisis occurred in May 1996, then $nf = 5$ and the one-year time-weighted $SF = \{[4 \times SF_{1994}] + [8 \times SF_{1995}]\}/12 = 1/3 \times SF_{1994} + 2/3 \times SF_{1995}$. Differences in the structural factors were tested among the three types of crises using a one-way analysis of variance (ANOVA).

2.3 Events Data

a) Human-coded. News wire reports, acquired through LexisNexis® (Reed Elsevier Inc., New York, NY) were used to randomly extract approximately 20 - 25 events for each calendar month in the 12 months preceding the crisis and during the month of the crisis (13th month). Events ranged from stabilizing to destabilizing and were scored between 1 and 3 for each of three attributes: Causality, Centrality, and Escalation (Carment et al. 2009). Causality accounts for an event's relevance to state stability or fragility in which a score of 1 indicates no clearly delineable

causal linkage and scores of 2 and 3 indicate indirect and direct linkage, respectively. Centrality reflects the proportion of political stakeholders that are affected in which scores of 1, 2, and 3 indicate < 25%, 25 – 75%, and > 75% coverage, respectively. Escalation is scored 1 if the event is comparable to others experienced in the state in the previous six months, 2 if more intense, and 3 if more intense than others in the previous five years. Destabilizing and stabilizing events were respectively scored negative and positive resulting in a composite score that ranged from -9 to +9.

In addition, events were categorized according to the state power component that it was most closely associated with (i.e., A = Authority, L = Legitimacy, C = Capacity), and according to the state performance cluster that it was most closely associated with (i.e., G = Governance, M = Economics, S = Security & Crime, H = Human Development, D = Demography, E = Environment); these components and clusters are detailed under Note B2 in Annex B.

Monthly sums of the positive (+SUM), negative (-SUM), and combined (SUM) events' scores, and of the percentages of events with scores < 0 and < -5 were determined (see Table 2 in Annex A for a summary explanation). The 12-month averages of these values prior to a crisis were tested for differences between the three types of crises using a one-way ANOVA. This was repeated for the 13th month sums. The Bonferroni correction for multiple comparisons was applied (i.e., 3 and 2 comparisons for the summed values and percentages, respectively). Further, monthly sums of positive and negative events were also determined for all state power components (A, L, C) and performance clusters (G, M, S, D, H, E), and similarly tested for differences between the three types of crises. In these instances, the Bonferroni correction was applied for 6 and 12 comparisons for the power and performance variables, respectively. These various measures were further tested for significant trends using linear regression during the 12 months leading up to the crisis with corresponding Bonferroni corrections applied. This allowed testing the hypothesis that destabilizing events increased in frequency and intensity prior to a crisis. Finally, the 12-month averages of all variables were also compared to the 13th (crisis) month values using a 2 (within) x 3 (between) ANOVA to test for significant differences among the two periods and the three types of crises.

b) Auto-coded. For comparative purposes, the predictive power of auto-coded events was also analyzed. Auto-coded data via computer algorithm extraction were obtained from VRA (see Note B4 in Annex B; Virtual Research Associates Inc., Weston, MA; personal communication). Events coverage was deemed sufficient if at least 130 events were available for analysis over the entire 13 month period with no event-free months. Event indices deemed suitable for this study were: i) Goldstein (GS) conflict-cooperation scale, ii) Domestic Conflict (DConf), and iii) Domestic Cooperation (DCoop). The GS (Goldstein 1992) scale ranges from extreme conflict to extreme cooperation involving all WEIS (World Events Interaction Survey)-categorized events (see Note B4 in Annex B; McClelland 1978). DConf and DCoop are the sums of negative and positive Goldstein scores, respectively, limited to domestic events. All indices were reported in monthly intervals.

Correlational analyses of GS, DCoop, and DConf were respectively performed with the combined, positive, and negative events' scores as assessed by the human coders (i.e., SUM, +SUM, and -SUM).

3   Results

3.1   Structural Factors

No differences were found between the REG, REV, and ETH crises for all state power components (A, L, C), state performance clusters (G, M, S, H, D, E), FI, and the PITF prediction variables. A significant difference was found, however, in the Polity index where the mean value of 5.8 for REG was higher than either REV (-1.2) or ETH (-3.4), which were not different from one another [$F(2, 22) = 13.67$, $p < 0.001$].

3.2   Events Data

3.2.1   Human-coded

A total of 7147 events (average of 22 per month) leading up to and including the month of crisis were analyzed for the 25 crises that occurred in different states. Figure 2 in Annex A displays the percentages of events that were negative (destabilizing) and Figure 3 shows the distribution of events catergorized by state power component and performance cluster. Although the distribution of events was fairly evenly dispersed among the state power components, certain patterns were noted. –A events tended to increase and +C events tended to decrease from the 12-month average to the 13th month irrespective of the type of crisis involved. Among the performance clusters, +G, -G, +M, and –S events accounted for 70% or more of all events, whether during the 12 months prior to a crisis or during the month of crisis. –S events tended to increase, though not significantly, from the 12-month average to the 13th month for all three types of crises (REG, REV, and ETH).

No variables were found to differ between the three types of crises during the 12 months leading up to a crisis. However, one variable was found to differ during the month of crisis (13th month). The average negative event score under the state power variable of Legitimacy (-L) was higher for REG (-4.9) and REV (-4.7) compared to ETH (-2.3) during the 13th month [$F(2, 22) = 6.35$, $p = 0.007$]. That is, destabilizing events coded as challenges to the state's legitimacy were higher in cases of adverse regime change and revolutionary wars compared to ethnic wars.

The 12-month overall average of SUM was positive and significantly higher than SUM during the 13th (crisis) month [$F(1, 22) = 11.90$, $p = 0.002$], which was negative (see Table 3). Similarly, -SUM was higher (i.e., less negative) during the 12-month pre-crisis period compared to the 13th month [$F(1, 22) = 7.05$, $p = 0.014$]. Also, the overall percentages of destabilizing (< 0) and highly destabilizing (< -5) event scores were lower during the 12 months preceding a crisis than during the month of crisis [$F(1, 22) = 12.56$, $p = 0.002$; $F(1, 22) = 8.72$, $p = 0.007$; respectively].

3.2.2   Auto-coded

Unfortunately, only 13 of the 25 crises (state identities 1, 3, 4, 10, 12, 13, 15, 16, 18, 19, 20, 21, and 25; see Table 1 in Annex A) had sufficient events coverage for acceptable auto-coded analysis. Of those that did, significant correlations with human-coded events were limited to 2

crises between GS and SUM (15.4% of the 13 crises), 2 crises between DCoop and +SUM (15.4%), and 8 crises between DConf and –SUM (61.5%).

3.3   Trend Analysis

Three crises are highlighted to illustrate the various trends (or lack of) that were found in this study. Auto-coding of these crises was also sufficient for comparison to the human-coded results. Figure 4 in Annex A shows the monthly history of event scores for Algeria, the first crisis to be highlighted. SUM was positive until the 10th month but decreased significantly during the 12 months leading to the crisis [SUM = 41.1 – 3.93·month, r^2 = 0.549; $F(1,10)$ = 12.18, p = 0.006], which involved intense terror campaigns initiated by Islamic militants and the military government. This decrease was driven by a significant downward trend in +SUM [= 70.1 – 3.06·month, r^2 = 0.507; $F(1,10)$ = 10.27, p = 0.009]. No trend was evident in –SUM, as it fluctuated considerably. Although not significant, +G and +A events' scores tended to decrease suggesting that stabilizing events associated with Governance and Authority diminished during the 12 months leading up to a crisis. No trends were found for the auto-coded event variables of GS, DConf, and DCoop, and no correlation was found between these variables with SUM, -SUM, and +SUM, respectively.

The second crisis involved Niger (Figure 5 in Annex A) that showed an increase in positive events scoring under Capacity [+C= -0.29 + 2.72·month, r^2 = 0.821; $F(1,10)$ = 45.73, p < 0.001] during the 12 months leading up to the crisis. Although not significant, SUM trended upwards during this period. These findings are counterintuitive given the expectation of deteriorating conditions prior to the crisis, which in this case was the overthrow of a democratically-elected government by a military coup (Table 1 in Annex A). A similar result was also found for Moldova where negative events scoring related to Security and Crime inproved [-S = -73.9 + 7.17·month, r^2 = 0.689; $F(1,10)$ = 22.13, p < 0.001] prior to a crisis of ethnic disarmament. While no trends were found for the auto-coded event variables of Niger, a significant correlation (r = -0.67) was found between –SUM and DConf during the 12 months leading to the crisis.

The last case involved the Democratic Republic of Congo (DRC; Figure 6 in Annex A) that indicated no trends in any event variable. SUM was consistently negative throughout the 12 months leading up to ethnic violence, punctuated by a marked spike downwards in the 7th month. Yet, SUM returned closely to its starting value resulting in an absence of a 12-month trend. The auto-coded results also demonstrated the same marked spike in negative events and recovery (although suggestive, no 12-month trend was found). The correlation between –SUM and DConf was quite high (r = -0.89), while none was found between SUM and GS, nor between +SUM and DCoop during the 12 months leading to the crisis.

The lack of trends demonstrated by the DRC crisis was unexpectedly typical of most cases. Indeed, 8 out of the 12 REG crises, 2 out of the 6 REV crises, and all 7 of the ETH crises (for an overall total of 68%) did not indicate trends in any event variable. And in those states that indicated trends, there was no consistency in the nature, frequency, and intensity of the event variables that did change.

4   Discussion

The hypothesis that a specific state power component (A, L, C) and/or state performance cluster (G, M, S, H, D, E) would dominate events preceding a specific type of crisis (REG, REV, ETH) has failed this analysis, in addition to the hypothesis that destabilizing events leading to a crisis would escalate in frequency and intensity. While significant trends were noted in some crises, these were too disparate to suggest any generalized patterns. In 17 out of the 25 crises (68%) studied including the DRC crisis (Figure 6 in Annex A), events were sporadically dispersed among the different state power components and state performance clusters. This can insinuate that either the nature, frequency, and intensity of events preceding a majority of crises are truly dispersed among the power components and performance clusters, or that these components and clusters are not optimized to distill differences in events preceding a crisis. While the CIFP construct of state power and performance variables were developed independently of the PITF criteria for state failure, they provide a broad and comprehensive evaluation of state status and fragility. It is not obvious and probably unlikely that other state power or performance categorizations would reveal differences in events preceding the different types of crises or between the periods prior to and during a crisis (13th month in this case) of any particular type.

The absence of this characterization of events preceding a crisis is consistent with our earlier finding of non-significance in the nature, frequency, and intensity of events between those preceding a *crisis of interest* and those at other times (Tikuisis et al. 2011). While certain results did concur with expectation, these have little utility for urgent warning. Specifically, the events' overall score (SUM) was negative and significantly lower during the month of a crisis compared to its average value during the 12 months preceding the crisis, which was positive (Table 3 in Annex A). Whether or not a pattern of increasingly higher positive SUMs is present in even earlier years is unknown, but worthy of further investigation. Indeed, if the 12 months prior to a crisis is significantly more violent than earlier periods, then this might be useful in forecasting a crisis. Perhaps the premise that structural factors reflect events prior to the 12 months examined is flawed and that events data should be analyzed for a longer period preceding a crisis.

That the overall SUM during the 12-month period was positive suggests that events during this period tended to be more stabilizing than destabilizing. However, this interpretation can be misleading since the overall SUM was dominated by the frequency and not intensity of positive events. While their occurrence (58% of total) was higher than the number of negative events, the magnitude of the latters' average score (-SUM) was higher than the positive events' average score (+SUM) during the 12 months preceding a crisis irrespective of type. Hence, while negative events were fewer in the 12 months leading up to a crisis, they were more intense (i.e., higher magnitude) than the positive events. Despite the higher intensity of destabilizing events, they still did not reveal any consistent trend prior to a crisis.

The only structural factor that was significantly different between different crises was the Polity index, which essentially indicated that states that experienced adverse regime change tended to be partially democratic vs. 'closed' anocratic states (Choksy & Choksy 2010) that typically experienced revolutionary and ethnic wars.   Factionalism in political participation (i.e., domination by ethnic or other parochial groups that self-promote to the detriment of others) helps explain the adverse regime changes that occur in partially democratic states while the risk of instability is highest in anocratic states (Goldstone et al. 2005).

The invariance of the different types of crises to the CIFP structural distinctions of the power components of A, L, and C was unexpected. For example, REV and ETH wars suggest a closer association with challenges to the government's capacity than adverse REG change, but the analysis of events preceding such crises does not support this view.

Also surprising was the low correlation between human-coded and auto-coded events. Respective significant correlations between SUM and GS, and between +SUM and DCoop were found in only 15.4% of crises involving those with sufficiently complete coverage for auto-coded analysis (n = 13). On the other hand, 8 crises (61.5%) showed a significant correlation between –SUM and DConf. Perhaps destabilizing events are less ambiguous to interpretation than stabilizing events, and therefore the former are scored with higher concurrence between humans and automation. If so, then the definition and evaluation of stabilizing events should be closely examined to ensure coherent analysis.

The generally null finding of this study with respect to forecasting a crisis through events analysis also calls into question the use of randomly-selected events data. While ostensibly a rational and objective approach, it might introduce irrelevant information that creates 'noise' in the analysis. Perhaps events should be filtered on the basis of the type of crisis anticipated. This assumes that it is reasonable to hypothesize the nature and intensity of events preceding a crisis, and that a theoretical construct can be developed to guide the judicious selection of events for such an analysis. Different events-filtering would then be applied for different types of crises, and such filtering need not exclude stabilizing events as long as they meet the criteria of relevance.

That the nature, frequency, and intensity of randomly-selected events preceding a crisis were not found to be unique to the type of crisis involved might also be due to the level of inspection applied herein. While the catergorization of events was widely covered by state power and performance factors, perhaps missing from the analysis is a deeper investigation on why and by whom events occur. Social/political theories of behaviour leading to collective political violence that generically fall under alternative hypotheses of 'greed' and 'grievance' might provide additional insight to the interpretation of events. For example, the percentage of unemployed youth, disparity in income distribution, and high population density coupled with poorly-serviced urban growth are examples of grievances that fall under 'relative deprivation' theory (Gurr 1970). Although not considered the primary cause of collective political violence, it is recognized as an important contributing synergistic factor (Brush 1996).

Other social/political phenomena that might help explain collective political violence is the competition of power between groups who recognize a favourable cost/benefit risk by acting forcefully through violent means. This phenomenon, termed 'resource mobilization' by Tilly (1972), falls under theories of opportunity or expected utility leading to collective political violence; variants include rational choice and political contention.

It would be prudent to invoke these various explanatory theories of collective political violence to the interpretation of events. Indeed, perceived injustice coupled with inadequacy of institutions creates tension that often esclates into violent conflict (Conteh-Morgan 2004). Capturing this nuance in events analysis would add to the structural approach taken thus far, especially by enhancing the scoring of causality. For example, detailed backward case analysis tracing might help explain the counterintuitive findings for Niger where Capacity increased prior to its crisis, for Moldova where Security and Crime improved prior to its crisis, and for DRC where no trends

were evident prior to its crisis. The quantification of events through the lens of social/political theories of behaviour leading to collective political violence should provide a deeper disaggregation of events that might yield significant indicators of specific crises that has so far eluded this research.

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Annex A   Tables and Figures

Table 1. List of PITF-identified crises.

State	mth/yr	Type	Description
Albania (1)	05/96	REG	Third post Communist parliamentary elections are marked by bloody police repression and electoral fraud. President Berisha attempts to consolidate political power but regime is undermined by poor performance (REG 5/96).
Algeria (13)*	05/91	REV	Efforts by ruling FLN (National Liberation Front) to ensure its electoral success through legislative gerrymandering trigger mass protests. Military increases its political influence in effort to prevent election of Islamicists. When Islamic Salvation Front wins elections, government cancels results (REG 1/92). Islamic militants and military-government initiate intense terror campaigns designed to undermine each other's support bases (REV 5/91-12/04).
Armenia (2)	07/95	REG	President Ter Petrossian suspends country's most influential opposition party. Electoral malpractice and government intimidation tarnish subsequent legislative and presidential elections.
Belarus (3)	04/95	REG	President Lukashenko orders troops to storm parliament building and dissolves legislature. Electoral regulations prohibit legislature from convening for eight months. Once quorum is achieved, President Lukashenko restricts its action.
Cambodia (4)	07/97	REG	Hun Sen ousts coalition partner and ends fractious coalition government installed following UN-supervised elections in 1993.
Central African Rep (5)*	03/03	REG	Following his dismissal as commander, troops loyal to Gen. Bozize mount challenge to elected government of President Patasse. Gen. Bozize succeeds in seizing power in March 2003 while Patasse is out of the country.
Comoros (6)	09/95	REG	Foreign-led mercenaries and disaffected Comorian troops overthrow elected government of President Djohar. French troops sent to the island one week later arrest mercenaries, reinstall elected prime minister, and arrest Djohar (REG 9/95-3/96). Army Chief of Staff, Col. Assoumani Azzali, leads April 30, 1999 coup that dissolves constitution and government; promised transition to new elections based on Antananarivo agreement do not materialize (REG 4/99).

Congo-Brazzaville (14)*	06/97	REV	Civil war erupts amid pre-election tensions when President Lissouba's army attacks the residence of former dictator Sassou-Nguesso. Rebels, backed by Angolan troops, take Brazzaville by force; fighting continues through September 1999. Pointe Noire Peace Agreement ends fighting in December 1999 (REV 6/97-12/99). Transition to democracy ends when Sassou-Nguesso rallies supporters, backed by Angolan Troops, and ousts Lissouba (REG 10/97).
Democratic Republic of Congo (DRC) (19)	03/92	ETH	Communal violence erupts in Shaba (Katanga) between Luba-Kasai minority and dominant Lunda; regional governments become more autonomous (ETH from 3/92). In reaction to absolute power wielded by Mobutu's military-backed government, pro-democracy opposition pressures him to appoint new prime minister and government (REG 12/92-7/03).
Egypt (15)*	02/92	REV	Terror campaign by militant Islamic groups against secular government; largely suppressed by mid-1996.
Ethiopia (20)	02/99	ETH	Border war with Eritrea provides opportunities for multiple Oromo ethnic factions, including the Oromo Liberation Front, the United Oromo Peoples Liberation Front (or Tokuchuma), the Al Ittihad, and the Islamic Oromo Liberation Front, to challenge Ethiopian government. Fighting escalates in February 1999 and again in May 1999 as Oromo factions gain support from Eritrea channeled through the Aideed faction in Somalia.
Gambia (7)	07/94	REG	Longstanding multiparty system, dominated by President Dawda, is overthrown in military coup. Military rule reaffirmed with controversial elections of 1996.
Haiti (8)*	09/91	REG	Populist priest Jean Bertrand Aristide, elected president by large majority, is unwilling to govern within political system and alienates elite and foreign community. He is overthrown and replaced by military-supported puppet government.
Kenya (21)	10/91	ETH	Kalenjin and Masai supporters of the government are encouraged in attacks aimed at driving Kikuyu, Luo, and other rival groups from their villages in highlands.
Lesotho (9)	05/98	REG	Mass protests against results of May 1998 elections are joined by mutiny of soldiers and shutdown of government by civil servants; foreign troops impose order and new elections are proposed (REG 5/98-1/99; REV 8/98-10/98).
Mali (22)	06/90	ETH	Rebellion by nomadic Tuaregs seeking regional autonomy (ETH 6/90).

Moldova (23)	03/92	ETH	President Snegur attempts to forcibly disarm Gagauz and Russian (Trans-Dniestr) ethnic militias. A more conciliatory strategy is adopted in December and violence subsides in political stalemate.
Nepal (16)	02/96	REV	Militants associated with the Communist Party of Nepal (Maoist) initiate armed insurrection. Following the assassinations of the Nepalese royal family and the ascension of King Gyanendra, Prime Minister Deuba initiates peace talks in July 2001 but the conflict intensifies once again in November 2001 as the talks fail (REV from 2/96).
Niger (10)*	01/96	REG	Military coup overthrows democratically elected government and suspends 1992 Constitution. Coup leader Col. Ibrahim Mainassara Barre is elected president in seriously flawed elections.
Rwanda (24)	10/90	ETH	Tutsi exiles of RPF launch successive attacks from Uganda prompting escalating violence between Hutu and Tutsi fighters (ETH 10/90-12/98). Hutu-dominated military government promises return to democratic rule, and transitional government is established. When President Habyarimana's aircraft is shot down in April 1994, Hutu government deploys military and armed gangs to systematically slaughter Tutsis and Hutu moderates (GEN 4/94-7/94). Ethnic-Tutsi RPF (Rwandan Patriotic Front) invades and seizes control of government by July 1994 (REG 4/94-7/94). Hutu militias (Inter-a-hamwe) are driven into neighboring regions, namely the DRC and Uganda, and fighting within Rwanda largely subsides by end of 1998. Hutu fighters launch a major attack in northwestern Rwanda from bases in the DRC in May 2001 but the attack is quickly crushed by the Rwandan Patriotic Army (ETH 5/01-7/01).
Senegal (25)	09/92	ETH	Violence increases in Casamance region as Casamancais (MFDC) rebels intensify separatist campaign.
Sierra Leone (17)	03/91	REV	Revolutionary United Front (RUF) mobilizes rural peoples, mainly Temne, in armed rebellion that devastates much of country. Various peace agreements and strong international pressure eventually lead to an end of fighting and disarmament of the RUF rebels (REV 3/91-7/01).
Solomon Islands (11)	06/00	REG	Since being brought in by US forces to help drive out remnants of the Japanese army from Guadalcanal in 1942, Malaita Islanders remained politically and economically active on the island and in the capital city Honiara. Native Isatabu Islanders (their name for Guadalcanal) mobilized their resentment in the 1990s and demanded special compensation from the central

		government for hosting the capital. When that was denied, local militias (Isatabu Freedom Fighters) were formed to intimidate and drive Malaitans out of the island. Many Malaitans fled to Honiara and a militant group formed to protect them: the Malaita Eagles Force (MEF). Clashes between the militias in the late 1990s culminated in a MEF seizure of the capital on June 5, 2000, and the forced resignation of Prime Minister Ulufa'alu. Anarchy ensued until Australia agreed to lead a peace-keeping force reestablish security and disarm the militias; the Regional Assistance Mission to the Solomon Islands (RAMSI) deployed on July 24, 2003 (REG 6/00-7/03).
Yemen (18)*	04/94 REV	Transition toward unified Yemen undermined by factional fighting, finally erupting with southern declaration of secession in May 1994. Rebellion quickly collapses when northern forces capture Aden in July 1994.
Zambia (12)*	11/96 REG	Constitutional amendments disqualify main opposition leader; President Chiluba easily wins subsequent elections.

Note: REG = regime change; REV = revolutionary war; ETH = ethnic war (see Note B1 for detailed explanation). The numbers in parenthesis adjacent to each state name refers to the state identity in the text and Figure 2. * indicates that a significant trend was found in an event variable during the 12 months prior to the crisis.

Table 2. Summary of event variables (all human-coded except GS, DConf, and DCoop, which were auto-coded).

Variable	Explanation
SUM	sum of event scores
+SUM	sum of +ve event scores
-SUM	sum of -ve event scores
< 0	–ve events
> 0	+ve events
% < 0	percentage of –ve events
% < -5	percentage of events less than -5
+A, etc.*	sum of +ve A event scores
GS	sum of Goldstein event scores
DConf	sum of -ve Goldstein event scores
DCoop	sum of +ve Goldstein event scores

Note: All sums are monthly. * includes all state power components (A, L, C) and state performance clusters (G, M, S, H, D, E).

Table 3. Summary of events' scores of all and specific types of crises
(1,2 significance at $p < 0.05$).

Variable	12-month average[3]				13th month			
	ALL	REG	REV	ETH	ALL	REG	REV	ETH
SUM	3.6[1]	3.2	5.0	2.5	-7.2	-8.9	-6.0	-6.6
+SUM	37.7	38.9	36.6	37.7	40.3	42.1	36.1	42.7
-SUM	-43.8[1]	-44.3	-42.2	-45.0	-49.6	-50.8	-47.9	-50.2
% < 0	41.5[2]	42.6	40.1	41.9	53.3	54.3	51.4	54.1
% < -5	8.4[2]	9.7	5.4	9.9	19.6	24.3	16.0	18.4

Note: n = 25 for ALL, 12 REG, 6 REV, and 7 ETH.
[1] higher compared to 13th month value
[2] lower compared to 13th month value
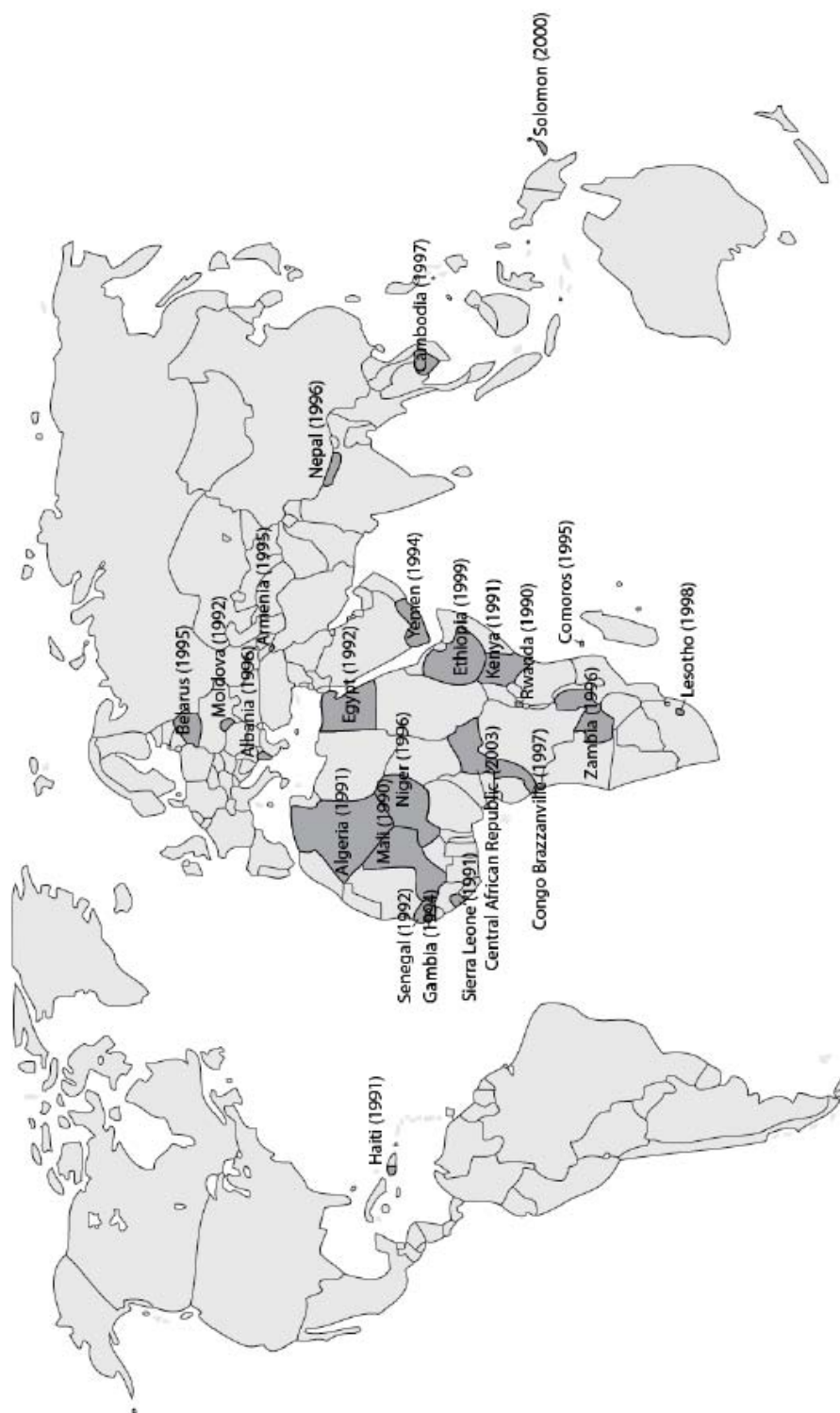[3] based on each state's monthly sum.
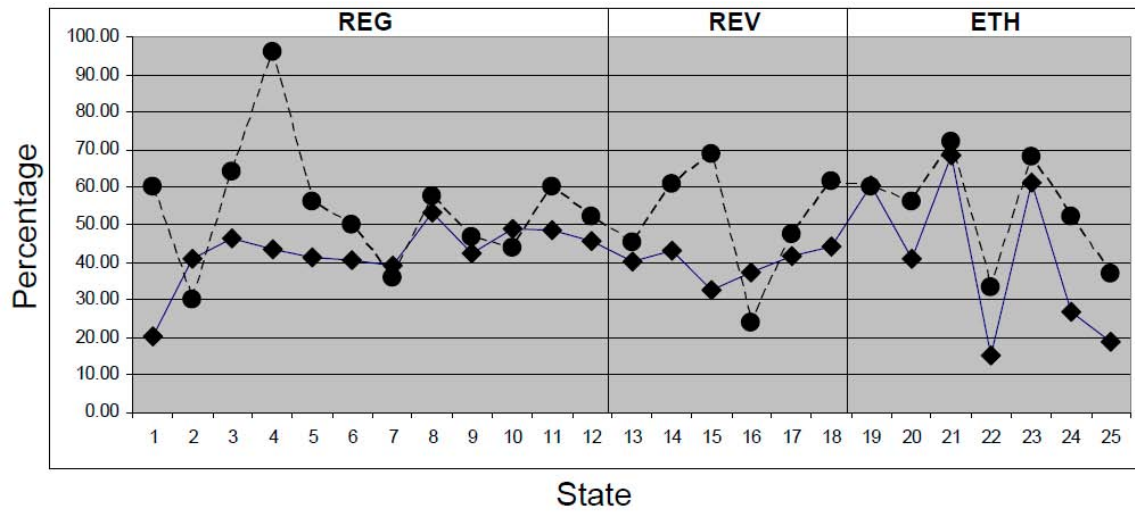
Figure 1. Countries selected for analysis.

Figure 2. Percentage of negative events (by count) shown for the 12-month average (◆) and the 13th (crisis) month (●). States are identified in Table 1.

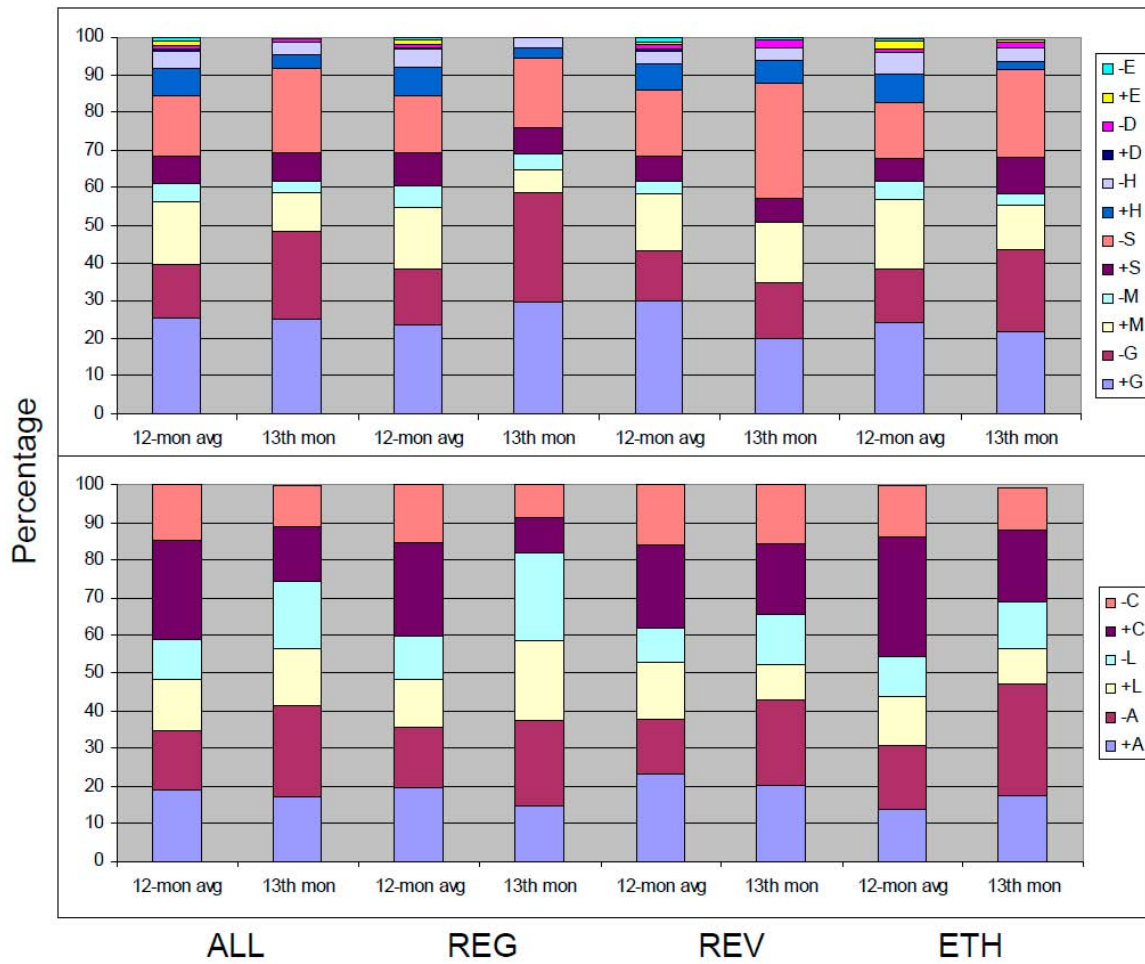Figure 3. Distribution of events (by count) characterized by the state power component (A, L, C) and state performance cluster (G, M, S, H, D, E).
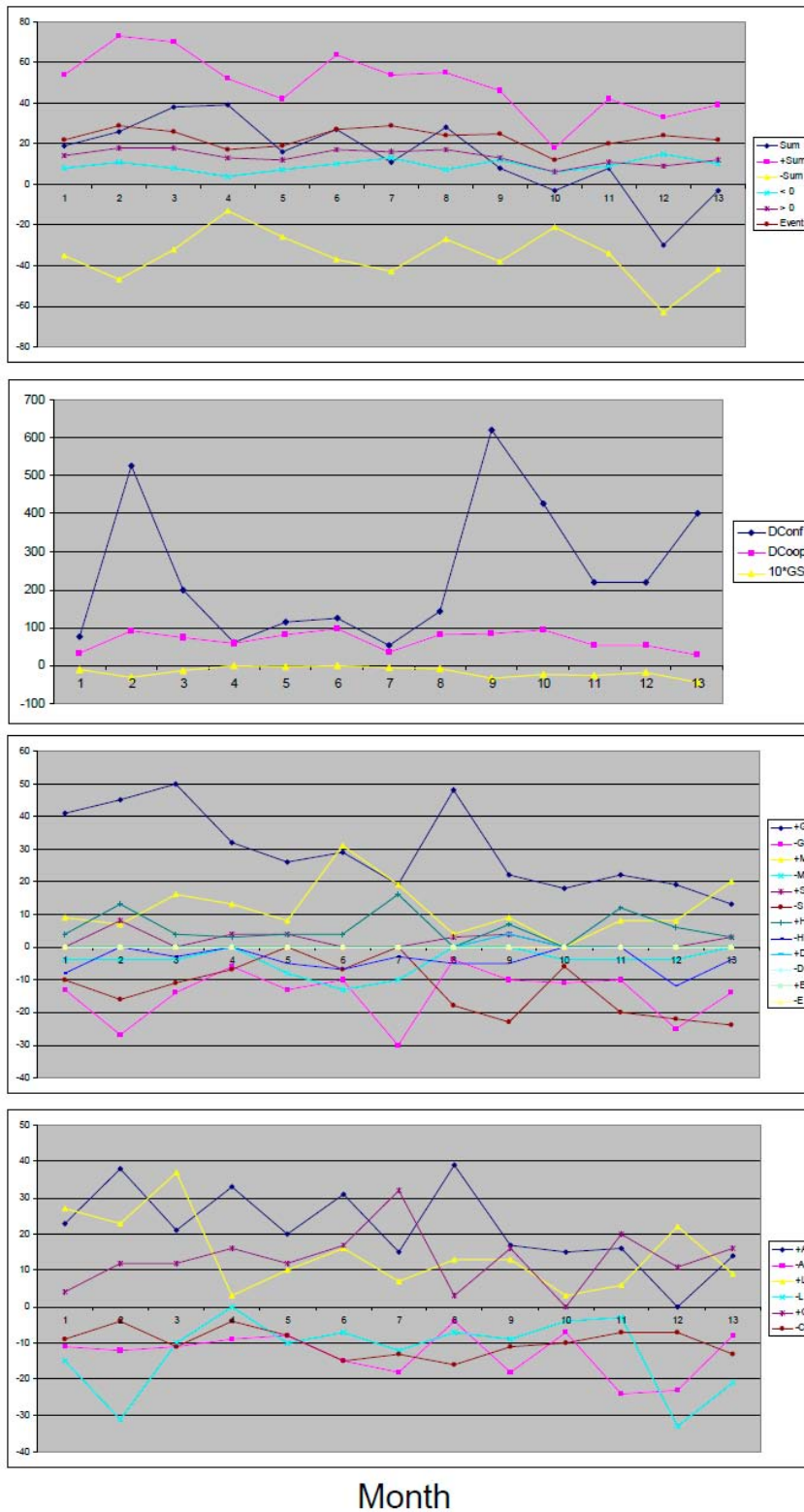
Month

Figure 4. Summary of monthly events for Algeria (see Table 2 for explanation of variables).
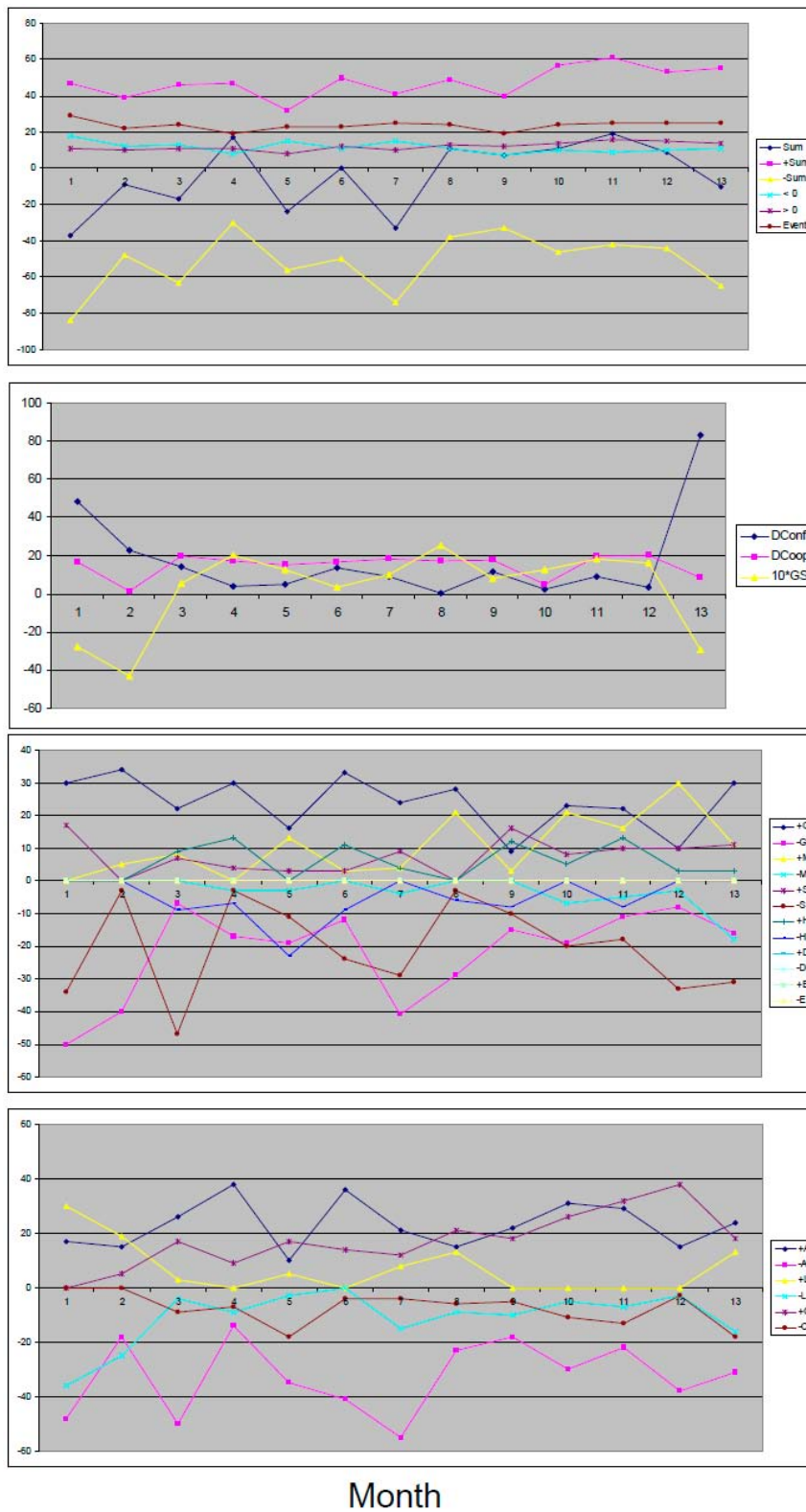
Figure 5. Summary of monthly events for Niger (see Table 2 for explanation of variables).
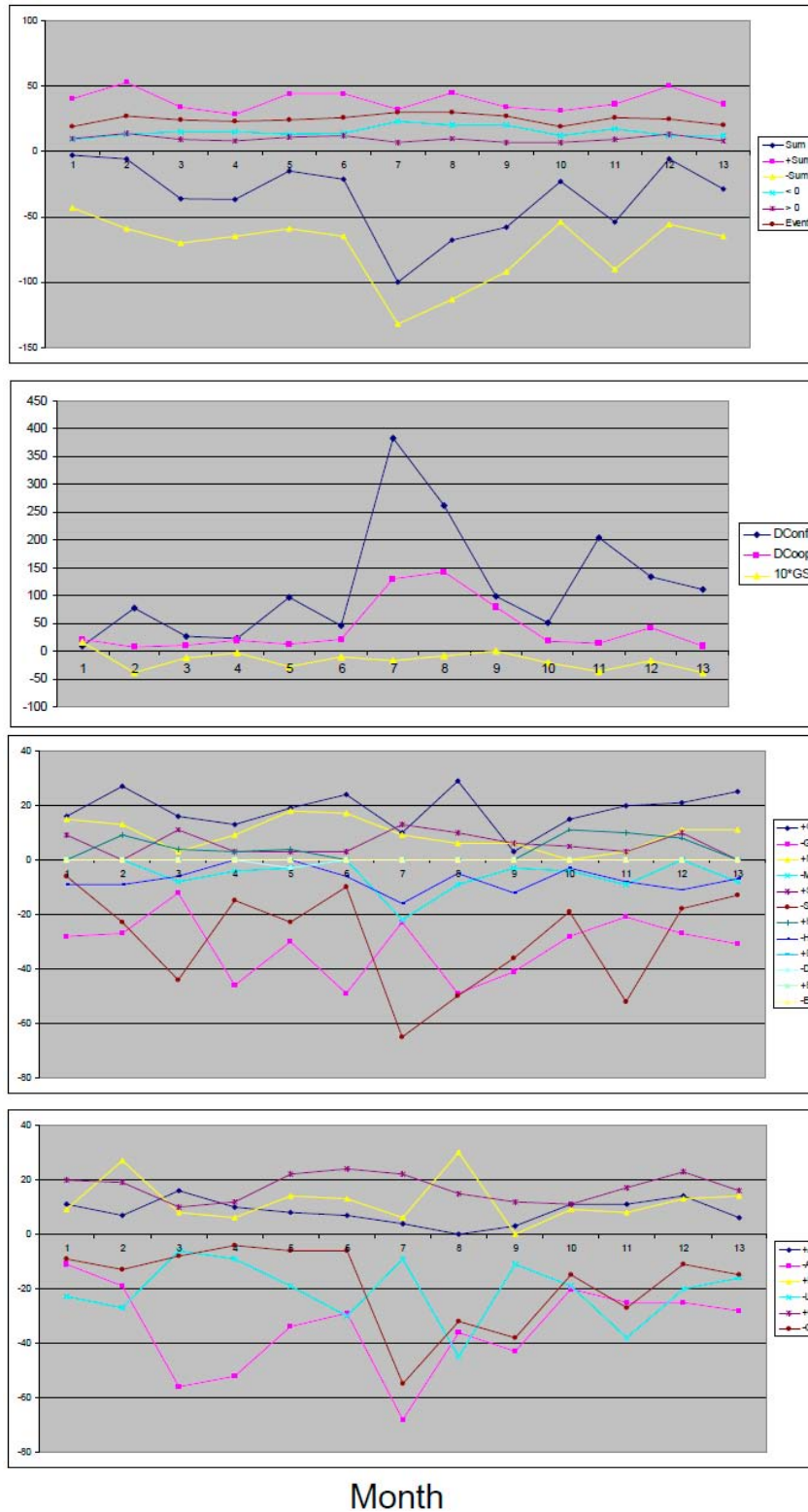
Month

Figure 6. Summary of monthly events for DRC (see Table 2 for explanation of variables).

Annex B   Notes

B.1   PITF Definitions of REV, ETH, and REG (Hewitt et al. 2008)

Revolutionary wars (REG) are episodes of violent conflict between governments and politically organized groups (political challengers) that seek to overthrow the central government, to replace its leaders, or to seize power in one region. Conflicts must include substantial use of violence by one or both parties to qualify as "wars. "Politically organized groups" may include revolutionary and reform movements, political parties, student and labor organizations, and elements of the armed forces and the regime itself. If the challenging group represents a national, ethnic, or other communal minority, the conflict is analyzed as an ethnic war, below.

Ethnic wars (ETH) are episodes of violent conflict between governments and national, ethnic, religious, or other communal minorities (ethnic challengers) in which the challengers seek major changes in their status. Most ethnic wars since 1955 have been guerrilla or civil wars in which the challengers have sought independence or regional autonomy. A few, like the events in South Africa's black townships in 1976-77, involve large-scale demonstrations and riots aimed at sweeping political reform that were violently suppressed by police and military. Rioting and warfare between rival communal groups is not coded as ethnic warfare unless it involves conflict over political power or government policy.

Regime change (REG) The main criterion used to identify adverse regime changes is the record of a six or more point drop in the value of a state's POLITY index score over a period of three years or less. Most of the cases of adverse regime changes are identified in this way. Such changes may be accomplished by coup, fiat, or popular referendum. The POLITY index is a measure of the institutionalized regime authority characteristics of the central state; the index scale ranges from minus 10 (-10, fully institutionalized autocracy) to plus10 (+10, fully institutionalized democracy). Institutionalized regime authority characteristics are coded and POLITY indices are computed for each independent state in the world for each year since 1800 in the Polity IV dataset. In some cases, central regime authority collapses such that no coherent or consistent authority can be identified over a substantial period of time; these periods are considered "interregnums" in the Polity IV coding scheme and are assigned a "standardized authority code" of minus 77 (-77) in the Polity IV dataset. The "interregnum" code is the second criterion used to identify adverse regime changes.

B.2 CIFP State Power Components and State Performance Clusters (Carment et al. 2006)

B.2.1 State Power Components

Authority (A)

Any functional state must possess the ability to enact binding legislation over its population. Further, that state must be able to provide a stable and secure environment to its citizens and communities. This security is a necessary prerequisite to the realisation of public, private, and civil society interests. States lacking in authority may be unable to exercise control over the full extent of their legal territory; such states will have difficulty responding effectively to security threats, whether internal or external. In some areas, non-state actors, such as rebel militias or criminal organizations, may possess *de facto* authority; in others, the rule of law may be completely absent. Border control may be intermittent or non-existent, enabling illicit flows of people and goods. State response to foreign incursions may be weak and ineffective. Other potential problems include the inability to: enforce government policy; combat corruption and criminality; effectively mobilize the resources of the state towards the ends requested and required by government; regulate private markets; or guarantee contracts.

Legitimacy (L)

Legitimacy refers to the ability of a state to command public loyalty to the governing regime, and to generate domestic support for that government's legislation and policy. Such support must be created through a voluntary and reciprocal arrangement of effective governance and citizenship founded upon principles of government selection and succession that are recognized both locally and internationally. States in which the ruling regime lacks either broad and voluntary domestic support or general international recognition suffer a lack of legitimacy. Such states face significant difficulties in maintaining peaceful relations between and among various communities within the state; any security that exists is likely the result of coercion rather than popular consent. As a result, such states are inherently vulnerable to internal upheaval and are likely to remain fragile so long as legitimacy remains wanting.

Capacity (C)

Capacity refers to the power of a state to mobilize public resources towards productive ends. States with a satisfactory level of capacity display a basic competence in political and economic management and administration, with governments capable of regulating domestic affairs and conducting international transactions. They also possess the basic infrastructure required of a modern state, including functional transportation and communication networks. States lacking in capacity may prove unable to respond effectively to sudden shocks such as natural disasters, epidemics, food shortages, or refugee flows. They may therefore be heavily reliant upon civil society and the international community in times of crisis.

B.2.2   State Performance Clusters

Governance (G)

Permanence of Regime Type

Level of Democracy

Party financing

Governance

Number of Women Parliamentarians

Percentage of Women Parliamentarians

Transparency of Government policymaking

Independence of the judiciary

Free press

Level of Corruption

Restrictions on Civil and Political Rights

Participation in international political orgs

Security and Crime (S)

Political violence of civilians (incidents)

Armed Conflict (intensity)

Political Stability

Number of Refugees Produced

Risk of ethno-political rebellion

Terrorism (Perception)

Economics (M)

Economic size

Relative economic size (GDP per capita)

Economic growth (GDP growth)

Inflation

Inequality Score (GINI Coefficient)

Unemployment by sex (Female)

Service reliability (Communications)

Internet

Informal Economy (Black market)

Investment climate (Contract regulation)

Standards of living (GNI per capita)

Remittances (Relative)

Reserve Holdings

External Debt (Relative)

Trade Openness (% GDP)

Overall Unemployment

Participation in international economic orgs

FDI [Net inflows (% of GDP)]

Foreign Aid (%GNI)

Military Expenditure (% of GDP)

Political violence of civilians (fatalities)

Organised crime

Human Rights – empowerment

Police force / law enforcement

Legal system

Human Rights – physical integrity

Demography (D)

Population growth rates

Population density

Population diversity (ethnic)

Population diversity (religious)

Youth Bulge (pop aged 0-14 as % of total)

Life expectancy (total)

Slum Population

Urban Growth Rate (annual percentage)

Environment (E)

Deforestation

Fresh water

Arable/fertile land availability

Human Development (H)

Child malnourishment

Bottom Quintile share of income

Absolute poverty

Literacy (Gender)

Primary School Enrolment (Total)

Primary School Enrolment (Girls)

Access to Sanitation

Health expenditure per capita

Health infrastructure

Health professionals

Children in Labour Force (% of total 10-14)

Access to improved water

Human Development Index

Gender Development Index

AIDS New cases reported (total number)

HIV/AIDS (Relative)

HIV/AIDS (Gender)

Infant mortality rates

B.3   PITF Prediction Variables for Political Instability (Hewitt et al. 2008)

Regime Consistency – The measure for regime consistency is based on data from thePolity IV data collection. A country's measure is the square of its Polity score, which ranges from -10 for a full autocracy to +10 for a full democracy.

Infant Mortality – There are two sources for this data. The primary source was the PITF. In addition, infant mortality data from the World Development Indicators were used for the 1999-2004 period. In some cases, linear interpolation was applied to address missing data within a country's time series.

Economic Openness – The measure for a country's economic openness is based on the portion of its GDP accounted for by total trade (imports plus exports). Then, the final measure is obtained by taking the natural log of this ratio (to reflect the diminishing marginal effects of greater amounts of economic integration with global markets). For the period 2001-2004, trade data were obtained from the World Development Indicators. Data from the Penn World Tables were utilized for information about GDP for the years 2001-2004. For the 1950-2000 period, all economic data were obtained from Gleditsch's expanded GDP and trade data (Gleditsch 2002).

Militarization – The data for this variable come from two sources—the Correlates of War Project (Singer et al 1972) and the World Development Indicators. The militarization indicator is constructed by first taking the ratio of country I's total military personnel over its total population (denoted MILZi). Military personnel data were taken from the Correlates of War Project for the years 1950-2001. Data from the World Development Indicators were used for the years 2002-2004. Then, the final militarization score is computed by comparing MILZi to that year's global median observation (MILZMED). Specifically, the militarization score is the ratio of MILZi over MILZMED.

Neighborhood War – A neighbor is defined as any state that is directly contiguous by land or by less than 150 miles of water. Contiguity data were obtained from the Correlates of War Project (Stinnett et al. 2002). In a given year, a neighbor is defined at being at war if it is involved in an armed conflict that has caused more than 25 battle-related fatalities in that year and the conflict

has caused more than 1,000 battle-related fatalities over its total history. All armed conflict data were obtained from the Uppsala Conflict Data Program (Harbom and Wallensteen 2005).

B.4   VRA metrics

No. Events	**All Events** – A count of all non-null IDEA category events. IDEA events include all WEIS cue categories (1 to 22) as well as additional IDEA event cue categories. • WEIS Cue Categories: Yield, Comment, Consult, Endorse, Promise, Grant, Reward, Agree, Request, Propose, Reject, Accuse, Complain, Deny, Demand, Warn, Threaten, Demonstrate, Sanction, Expel, Seize, Force. • IDEA Cue Categories: Economic Activity, Other Human Action, Human Illness, Human Death, Economic Status, Cognitive State, Other Human Condition, Natural Disaster, Accident, Other Incident, Animal Attack, Animal Death, Animal Illness, Other Animal Incident, A&E Performance, Sports Contest
No. Actions	**All Actions** – A count of all non-null, WEIS category events (1 to 22; see above).
GS	**Goldstein**** – The proportion of summed Goldstein scores to the summed scores for All Actions. • Goldstein scores ranges from -10 (extreme conflict) to 8.3 (extreme cooperation). Zero value events are excluded from these calculations. • All Actions scores are calculated by applying Goldstein scores to all WEIS category events (1 to 22 – Yield, Comment, Consult, Endorse, Promise, Grant, Reward, Agree, Request, Propose, Reject, Accuse, Complain, Deny, Demand, Warn, Threaten, Demonstrate, Sanction, Expel, Seize, Force).
DConf	**Domestic Conflict**** – The sum of events with negative Goldstein scores (the Goldstein scale ranges from -10, extreme conflict, to 8.3, extreme cooperation). This score is limited to domestic events as only events that have the same source and target administration (country) values are included.
DCoop	**Domestic Cooperation**** – The sum of events with positive Goldstein scores (the Goldstein scale ranges from -10, extreme conflict, to 8.3, extreme cooperation).This score is limited to domestic events as only events that have the same source and target administration (country) values are included.

** In the original 1992 Goldstein study, 61 level-2 plus 2 level-one events were scored. Therefore, not all IDEA events have a one-to-one match with the original WEIS set. For events that were not scored in the original WEIS study, the average score for the events within that cue is used.

List of symbols/abbreviations/acronyms/initialisms

A, +A, -A	Authority
ANOVA	Analysis of Variance
C, +C, -C	Capacity
CF	Canadian Forces
CIFP	Country Indicators for Foreign Policy
D, +D, -D	Demography
DConf	Domestic Conflict
DCoop	Domestic Cooperation
DND	Department of National Defence
DRC	Democratic Republic of Congo
DRDC	Defence Research & Development Canada
E, +E, -E	Environment
ETH	Ethnic (war)
FI	Fragility Index
FSI	Failed State Index
G, +G, -G	Governance
GS	Goldstein (conflict-cooperation scale)
H, +H, -H	Human Development
L, +L, -L	Legitimacy
M, +M, -M	Economics
PITF	Political Instability Task Force
R&D	Research & Development
REG	Regime (change)
REV	Revolutionary (war)
S, +S, -S	Security and Crime
SF	Structural Factor
SUM, +SUM, -SUM	Composite event score
VRA	Viritual Research Associates
WEIS	World Events Interaction Survey

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3. TITLE (The complete document title as indicated on the title page. Its classification is indicated by the appropriate abbreviation (S, C, R, or U) in parenthesis at the end of the title)

Can Events Predict Violent Intra–State Crises? (U)
(U)

4. AUTHORS (First name, middle initial and last name. If military, show rank, e.g. Maj. John E. Doe.)

Peter Tikuisis

5. DATE OF PUBLICATION (Month and year of publication of document.) November 2010	6a NO. OF PAGES (Total containing information, including Annexes, Appendices, etc.) 50	6b. NO. OF REFS (Total cited in document.) 18

7. DESCRIPTIVE NOTES (The category of the document, e.g. technical report, technical note or memorandum. If appropriate, enter the type of document, e.g. interim, progress, summary, annual or final. Give the inclusive dates when a specific reporting period is covered.)

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9a. PROJECT OR GRANT NO. (If appropriate, the applicable research and development project or grant under which the document was written. Please specify whether project or grant.)	9b. CONTRACT NO. (If appropriate, the applicable number under which the document was written.)
10a. ORIGINATOR'S DOCUMENT NUMBER (The official document number by which the document is identified by the originating activity. This number must be unique to this document) DRDC Toronto TR 2010–189	10b. OTHER DOCUMENT NO(s). (Any other numbers under which may be assigned this document either by the originator or by the sponsor.)

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(U) Events data were analyzed for their predictive potential as indicators of occurrences of politically violent intra–state crises marked by adverse regime changes, revolutionary wars, and ethnic wars. An average of 22 randomly–selected destabilizing and stabilizing events per month were analyzed for 25 crises between 1990 and 2003 inclusive selected from those identified by the Political Instability Task Force (PITF) as onsets of state failure. Events covered a 12–month period preceding a crisis plus the month of crisis for a total of 7147 events. Subject matter experts analyzed these events according to various CIFP–defined state power and state performance characteristics, and scored them according to an impact assessment involving casuality, centrality, and escalation. Sixty–eight percent of crises did not indicate trends in any event characteristic leading up to the crises. Of those crises where trends were significant, there was no consistency in the nature, frequency, intensity, and direction of the event characteristics that did change. This study concluded that randomly–selected events analyzed using the CIFP construct of state power and state performance factors do not readily reveal imminent politically violent intra–state crises identified as state failure onsets by PITF during the 12 months leading up to the crisis. Recommendations for extracting a deeper disaggregation of events data for prediction purposes are discussed.

(U) Les données sur les événements ont été analysées en fonction de leur potentiel prédictif, notamment en tant que signes précurseurs de crises intra étatiques accompagnées de violences politiques et caractérisées par des changements de régime, des guerres révolutionnaires et des conflits ethniques néfastes. En moyenne, 22 événements par mois – choisis au hasard et avec un effet déstabilisateur ou stabilisateur – ont été analysés. Cela englobait 25 crises survenues entre 1990 et 2003 inclusivement, qui faisaient partie de la liste des situations considérées par le Groupe de travail sur l'instabilité politique (GTIP) comme les signes précurseurs d'une déroute de l'État. L'analyse portait sur les 12 mois qui ont précédé une crise et le mois pendant lequel elle a sévi, c'est à dire sur 7 147 événements au total. Des experts en la matière les ont analysés en fonction de différents critères permettant de mesurer le pouvoir et la performance de l'État, tels qu'ils sont définis dans les Country Indicators for Foreign Policy (CIFP). Les experts les ont classés en fonction d'une évaluation des répercussions, y compris du nombre de victimes, de la centralité et de l'escalade des violences. Dans 68 p. 100 des cas, en fonction de chacun des critères utilisés, il n'était pas possible de prévoir les crises. S'agissant des crises pour lesquelles les signes avant coureur étaient importants, aucune uniformité n'a été constatée en ce qui concerne la nature, la fréquence, l'intensité et l'orientation des caractéristiques liées à l'événement, qui ont changé. L'étude a permis de conclure que, pour les événements choisis au hasard et analysés en fonction des critères définissant le pouvoir et la performance de l'État, au titre des CIFP, aucun signe ne permettait de prévoir facilement l'éminence d'une crise intra étatique accompagnée de violences politiques, conformément aux signes précurseurs définis par le GTIP, pendant les 12 mois qui ont précédé la crise en question. Il est en outre question des recommandations selon lesquelles il convient de mieux ventiler les données sur les événements à des fins prévisionnelles.

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(U) political violence; failed state; early warning; crisis forecast; regression analysis

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